AMENDMENTS TO THE CLAIMS

1. (Previously presented) A zeolite material of the pentasil type comprising an alkali metal and alkaline earth metal content of not more than 150 ppm and a molar ratio of Si to Al of from 250 to 1500, wherein at least 90% of the primary particles of the zeolite material are spherical and at least 95% by weight of the spherical primary particles have a diameter of less than or equal to 1 μm.

2. (Previously presented) The zeolite material as claimed in claim 1, wherein a portion of the zeolite material has the structure type ZSM-5.

3. (Previously presented) The zeolite material as claimed in claim 1, wherein the alkali metal and alkaline earth metal content of the zeolite material is not more than 100 ppm.

4. (Previously presented) The zeolite material as claimed in claim 1, wherein the diameter of the spherical primary particles is from 50 to 250 nm.

5. (Previously presented) The zeolite material as claimed in claim 1, wherein the molar ratio of Si to Al is in the range of from 250 to 750.

6. (Previously presented) The zeolite material as claimed in claim 1, wherein the molar ratio of Si to Al is in the range of from 350 to 600.

7. (Withdrawn) A molding containing the zeolite material according to claim 1 and at least one binder material.

8. (Withdrawn) The molding as claimed in claim 7, wherein the binder material includes SiO_2.

9. (Withdrawn) The molding as claimed in claim 7, wherein the binder material is present from 5 to 80% by weight, based on the total weight of the dried molding.

10. (Withdrawn) The molding as claimed in claim 9, having a specific surface area of at least 350 m^2/g, and a pore volume of at least 0.6 ml/g.

11. (Withdrawn) The molding as claimed in claim 10, having a cutting hardness of from 2 to 15 N.

12. (Withdrawn) A process for the preparation of a zeolite material, comprising the steps

(i) providing a mixture containing at least one SiO_2 source, at least one aluminum source and at least one template compound, wherein the mixture contains not more than 150 ppm of alkali metal and alkaline earth metal and wherein the at least one SiO_2 source and the at least one aluminum source are used in a ratio which permits the formation of a crystalline material having a molar ratio of Si to Al of from 250 to 1500;

(ii) reacting the mixture to give a mother liquor containing crystalline material, said crystalline material containing at least a portion of at least one template compound;

(iii) separating the crystalline material from the mother liquor; and

(iv) removing the at least one template compound from the crystalline material.

13. (Withdrawn) The process as claimed in claim 12, wherein the SiO_2 source includes tetraalkoxysilane and the template compound includes at least one tetraalkylammonium hydroxide, and the mixture according to (i) additionally contains water.

14. (Withdrawn) The process as claimed in claim 13, wherein alcohol which is formed in the mixture according to (i) is distilled off prior to reacting the mixture according to (ii).

15. (Withdrawn) The process as claimed in claim 14, wherein the reacting the mixture according to (ii) is conducted at a temperature from 150 to 180°C in an autoclave with a reaction time of 1 to 48 hours.

16. (Withdrawn) The process as claimed in claim 12, wherein the crystalline material separated according to (iii) is dried at a temperature from 100 to 160°C and then calcined at a temperature from 450 to 700°C.

17. (Withdrawn) The process as claimed in claim 12, wherein, after step (iv), the zeolite material is exposed to water in an autoclave and is subsequently dried at a temperature from 80 to 160°C and is subsequently calcined at a temperature from 400 to 750°C.

18. (Currently amended) A zeolite material of the pentasil type obtainable by a process ~~according to claim 12,~~ comprising the steps

(i) providing a mixture containing at least one SiO_2 source, at least one aluminum source and at least one template compound, wherein the mixture contains not more than 150 ppm of alkali metal and alkaline earth metal and wherein the at least one SiO_2 source and the at least one aluminum source are used in a ratio which permits the formation of a crystalline material having a molar ratio of Si to Al of from 250 to 1500;

(ii) reacting the mixture to give a mother liquor containing crystalline material, said crystalline material containing at least a portion of at least one template compound;

(iii) separating the crystalline material from the mother liquor; and

(iv) removing the at least one template compound from the crystalline material,

said zeolite material comprising an alkali metal and alkaline earth metal content of not more than 150 ppm and a molar ratio of Si to Al in a range of from 250 to 1500, wherein at least 90% of the primary particles of the zeolite material are spherical and at least 95% by weight of the spherical primary particles have a diameter in the range of from less than or equal to 1 μm.

19. (Withdrawn) A process for the production of a molding, comprising the steps

(I) providing a zeolite material of the pentasil type comprising an alkali metal and alkaline earth metal content of not more than 150 ppm and a molar ratio of Si to Al of from 250 to 1500, wherein at least 90% of the primary particles of the zeolite material are spherical and at least 95% by weight of the spherical primary particles have a diameter of less than or equal to 1 μm and at least one binder material to form a mixture;

(II) kneading of the mixture;

(III) molding of the kneaded mixture to give at least one molding;

(IV) drying of the at least one molding; and

(V) calcining of the dried molding.

20. (Withdrawn) The process as claimed in claim 19, wherein the binder is a SiO_2-containing binder material.

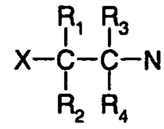
21. (Withdrawn) The process as claimed in claim 19, wherein the mixture according to (I) further comprises at least one pore forming agent.

22. (Withdrawn) A molding, obtainable by a process according to claim 19.

23. (Withdrawn) Use of a zeolite material according to claim 1 as a catalyst.

24. (Withdrawn) The use as claimed in claim 23, wherein the catalyst is used in the synthesis of triethylenediamine.

25. (Withdrawn) A process for the preparation of triethylenediamine or of an alkyl-substituted derivative thereof by reacting at least one starting material which has a structural unit according to formula (I)



(I)

where R_1, R_2, R_3 and R_4, independently of one another, are hydrogen or an alkyl-group having 1 to 4 carbon atoms and X is an oxygen or nitrogen atom, wherein the reaction is carried out over a zeolite catalyst which contains a zeolite material according to claim 1.

26. (Withdrawn) The process as claimed in claim 25, wherein the starting material is selected from

piperazine (PIP),
ethylenediamine (EDA),
or a mixture thereof.

27. (Withdrawn) The process as claimed in claim 26, wherein the starting material is reacted in at least one solvent or diluent.

28. (Withdrawn) The process as claimed in claim 26, wherein at least a portion of the zeolite material is provided in the H form.

29. (Withdrawn) The process as claimed in claim 26, wherein the starting material is ethylenediamine, and the reaction is carried out at a temperature of from 300 to 400°C and a pressure of from 0.01 to 50 bar.

30. (Withdrawn) The process as claimed in claim 26, wherein the starting material is piperazine, and the reaction is carried out at a temperature of from 300 to 450°C and a pressure of from 0.01 to 50 bar.

31. (Withdrawn) The process as claimed in claim 26, wherein the starting material is a mixture of piperazine and ethylenediamine in water, and EDA and PIP are present in an amount of from 10 to 50% by weight based on water and in an amount of from 90 to 50% by weight based on the sum of the weights of EDA and PIP.

32. (Withdrawn) The process as claimed in claim 31, wherein the reaction is conducted at a temperature of from 290 to 400°C and a pressure of from 0.01 to 10 bar.

33. (Withdrawn) The process as claimed in claim 31, wherein EDA and PIP are present in a weight ratio in the range of from 1:1 to 10:1, calculated as the ratio of the weight of EDA to the weight of PIP.